



RHODE ISLAND  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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TDD 401-831-5508

May 26, 1998

James Shaffer, Remedial Project Manager  
U.S. Department of the Navy  
Northern Division  
Naval Facilities Engineering Command  
10 Industrial Highway  
Code 1823-Mail Stop 82  
Lester, PA 19113-2090

RE: Work Plan for Background Concentrations Investigation for Naval Education and Training  
Center Facility, Newport, Rhode Island

Dear Mr. Shaffer:

The Office has reviewed the Background Concentrations Investigation Work Plan, dated 27 April 18, 1998. Attached are comments generated as a result of that review. If the Navy has any questions concerning the above, please contact me at (401) 277-2797 ext. 7111.

Sincerely,

Paul Kulpa, Project Manager  
Office of Waste Management

cc: Warren S. Angell, DEM OWM  
Richard Gottlieb, DEM OWM  
Kymberlee Keckler, EPA Region I  
Kevin Koyle, NETC

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**Comments on the Background Concentrations Investigation  
Naval Education and Training Center Facility Work Plan**

**1. General Comment**

Background studies are site-specific studies which compare the concentration of a site's contaminant to that of the immediate local environment. In order for these studies to be valid, the background samples must be taken from a similar environment, specifically a similar soil type. This is necessary as the concentration of materials found in a soil with a high inorganic content, such as sandy soil, are typically quite different than those found in a soil with a high organic content, such as loam. The Rhode Island Department of Environmental Management Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases recognizes this basic principle and requires that, *For the purposes of defining background concentrations samples shall be collected from areas that have the same characteristics as the soils at the contaminated site.* The Navy has proposed conducting a background study for the entire Naval Base. This base, which is located in the towns of Portsmouth, Middletown and Newport, encompasses approximately twelve hundred acres. As such, it contains variety of environments and soil types. Collection of samples from this variety of soil types would invalidate the background study. Efforts to collect samples from a single soil type would also be of limited use as site specific comparison can only be made if the site contained the same soil type.

Previously, the Navy and the regulators recognize the problems associated with a base wide study and agreed that all background samples should be site specific. A base wide study would provide information concerning the range of contaminants, but it could not be substituted for site-specific information. Accordingly, the proposed base wide background study may be employed to provide information concerning the possible range of materials found at the base. In this manner it may have merit as a device for determining whether a site specific background study is warranted.

**2. General Comment.**

The Navy has proposed conducting a background study for metals, semivolatile organic compounds, pesticides and PCBs. Metals are naturally occurring compounds and therefore may be found at elevated concentrations. The organics in the list, PCBs, pesticides, etc. are not naturally occurring and background studies for these compounds are not normally done. Please modify the Work Plan accordingly.

**3. General Comment.**

The Work Plan was submitted in support of a proposed background sampling investigation. Accordingly, the critical aspect of the Plan is the actual background sampling locations. During the selection of the proposed locations the Navy would of had

to examine previous land use, reviewed historical aerial photographs, and evaluated potential or actual sources of contamination, etc. As this is the crux of the investigation, the Plan would have to provide this information as justification for the proposed sampling locations. Therefore, it would be anticipated that a significant portion of the Plan would address background sampling locations and would include discussions supporting said locations. This information was not found in the submitted document. The Plan only contains a figure showing sample locations and a table listing said locations. As such, the Office cannot evaluate the crucial element of entire Plan. Please be advised that by omitting this essential section of the report, the Navy has dictated that the main focus of the review will have to occur on the draft final version of the Plan.

**4. General Comment.**

The Navy has proposed collecting twenty additional samples for the background study. As previously stated this study will not meet the requirements for a background analysis but may be useful in providing information concerning the ranges of materials at the site. Considering its limited use, the Navy may want to evaluate a background study based upon existing analytical data. Samples have been collected from the site under the Superfund, RCRA, LUST and State programs. As such there may be ample existing analytical data to perform the background analysis, thus negating the need to spend limited funds to collect additional samples under the current proposal. The Office would review any proposal by the Navy to utilize existing data to meet the limited objectives of this background investigation. Please be advised that the requirements of comment # 3 and 6 will also have to be met should the Navy elect to sue existing data in the study.

**5. Section 2.2.5, Decision Rule;  
Page 2-3.**

This section of the Plan contains a general discussion of the statistical analysis of the data. The Work Plan should specify that the Background Report will include all formulas used in the statistical analysis and justification for the use of the formulas and any assumptions used in the formulas. In addition, the Work plan should specify that all work used in the calculations will be included as an appendix. Finally, the Office is aware that specific statistical procedures to be employed cannot be determined until the data is collected. Therefore, the Office cannot comment on this part of the Plan.

**6. Section 3.2, Task 1, Surficial Soil Sampling;  
Page 3-1, Whole Section.**

This section of the Plan includes a table and a figure with proposed sampling locations. As previously stated, justification is required for each background sampling location. This justification, at a minimum, should include a brief description of each sample location, previous land use, results of the review of the aerial photographs and or the actual aerial photographs for the proposed locations, appropriate information concerning potential contaminants, etc.

**7. Section 3.2, Task 1, Surficial Soil Sampling;  
Page 3-1, Whole Section.**

This section of the Plan includes a table and a figure with proposed sampling locations. The Navy has proposed taking samples from known contaminated sites, that is areas which are currently being studied to address past releases. This is normally not done, as background samples are supposed to be collected from unimpacted areas. Therefore, should the Navy elect to use these locations, additional justification will be required.